REMARKS

This is in response to the non-final Official Action currently outstanding with regard to the present application.

Claims 1-10 were pending in this application at the time of the issuance of the currently outstanding Official Action. By the foregoing Amendment, Claims 1-10 have been canceled, and New Claims 11-28 have been added. No Claims have been amended or withdrawn. Accordingly, upon the entry of the foregoing amendment, Claims 11-28 will constitute the Claims under active prosecution in this application.

More particularly, in the currently outstanding Official Action the Examiner has:

1. Acknowledged Applicants' claim for foreign priority under 35 USC §119 (a)-(d) or (f), and confirmed the receipt of the required copies of the priority documents by the United States Patent and Trademark Office;

2. Indicated that the drawings as filed with this application on 14 December 2001 are acceptable;

3. Acknowledged his consideration of the Information Disclosure Statements filed in this application by providing the Applicant with copies of the Forms PTO-1449 and PTO/SB/08a/b that accompanied the Information Disclosure Statements filed on 25 February 2002; 8 July 2002; 22 October 2004; and 1 August 2002, respectively, duly signed, dated and initialed by the Examiner to confirm his consideration of the art listed therein;

4. Rejected Claim 1-2, 4, 6-7 and 9 under 35 USC §102(e) as being anticipated by Miyashita et al. (US Patent 6,735,160 B1);

5. Rejected Claims 3, 5, 8 and 10 under 35 USC §103(a) as being unpatentable over the Miyashita et al reference in view of Ueki (US 6,678,236 B1); and

6. Indicated that the following prior art has been made of record as being considered pertinent to Applicant's disclosure. U.S. Patent (US 6,252,685 B1) to Yokochi cited as disclosing an optical recording medium and apparatus of judging fake thereof; U.S. Patent (US 6,338,889 B1) to Shibata et al cited as disclosing an optical information recording medium; U.S. Patent (US 6,580,682 B1) to Kamperman et al cited as disclosing a system for copy protection of recorded information; U. S. Patent (US 5,838,658) to Nakane et al cited as disclosing an optical disc; and U. S. Patent (US 4,569,038) to Nagashima et al cited as disclosing an optical disk, a high density optical disk system, and a high density recording/reproducing method using the optical disk.

No further comment regarding items 1-3 and 6 above is deemed to be required in these Remarks.

With respect to items 4 and 5, Applicant by the foregoing Amendment has rewritten all the claims of this application for purposes of providing a more concise, clear and readable presentation of the the present invention. Specifically, Claims 1-10 have been canceled, without prejudice, and New Claims 11-28 have been added. Accordingly, as a result of the foregoing Amendment, this application now contains 3 independent claims instead of the originally filed 9 independent claims. Further, the features of original Claims 2, 4, 5 and 7-10 are retained in dependent claims.

More particularly, New independent Claim 11 is directed to a recording medium and New dependent Claims 12-15 depend directly or indirectly from New Claim 11 reciting features similar to those of original Claims 2-5. New Claim 16 recites an additional feature of the present invention previously disclosed, but not specifically claimed. New independent Claim 17 is directed to a reproducing apparatus and New dependent Claims 18-22 depend either directly or indirectly from New Claim 17 reciting features similar to those of Claims 12-16 discussed above. Finally, New Claim 23 is directed to a method of reproducing main information stored on an optical recording medium, and Claims 24-28 depend directly or indirectly from New Claim 23 reciting features similar to those of original Claims 12-16 discussed above. The entry of these New Claims into this application in response to this communication is respectfully requested.

At he outset of this discussion of the currently outstanding rejections of the originally filed claims of this application, Applicant respectfully submits that it is to be understood that an inventive aspect of the present invention lies in the use of two types of information (i.e., digital watermark information and additional information as those types of information are defined in the present specification) stored in two different ways. The characteristics of these two types of information and their storage on an optical storage medium are such that the digital watermark information ***must*** be copies with the main information, and the additional information ***cannot*** be copied with the main information. Further, in the present invention the digital watermark information copied with the main information indicates copyright information concerning the copyright status of the main information. On the other hand, the presence/absence of additional information that cannot be copied on a particular optical recording medium indicates whether or not that optical recording medium is original (i.e., authorized) or a copy (i.e., unauthorized).

Hence, the present invention allows the shortcomings of the background art discussed in the present specification (i.e., (i) copyright protection using a content scrambling system can be defeated by breaking the encryption code thereby allowing pirated copies to be easily made; (ii) placing restrictions upon the reproduction of an optical disk from which information based on tangential push/pull signals cannot be detected is overly restrictive in that it prevents copying of copyright-free information and does not prevent unauthorized copying of data created by encoding images from a screen display; and (3) digital watermarking of copyrighted information in and of itself either does not prohibit unauthorized copying or the absence thereof may be a factor that prevents the copying of information that is not subject to copyright) to be overcome. Specifically, the two types of information provided by the present invention and the manner of their storage on an optical recording medium provide a synergistic advantage that allows unauthorized disks to be determined (as shown for example in Table 1 and related discussion at pages 25-26 of the present specification).

Turning now specifically to New Claim 11, it will be seen that this claim is directed to digital watermarking indicative of copyright information being embedded in the main information in such a way that copying of the main information necessarily includes the coping of the digital watermarking (see particularized definition of "digital watermarking" at page 14, line 19 to page 15, line 10 of the present specification). Contrary to the Examiner's arguments, Applicant respectfully submits that this feature is not taught, disclosed or suggested by either the Miyashita reference or the Ueki references. In particular, the Miyashita reference does not disclose the "embedding" of copyright information in the main information as disclosed in the present specification. This is because the Miyashita reference does not teach, disclose or suggest the provision of digital watermarking representative of copyright information being "embedded" in the main information such that that digital watermarking is necessarily copied with the main information. Instead, the Miyashita reference discloses the storage of copyright information associated with the main information in the so-called "jitter" introduced into the recording medium by the physical placement of the main information carrying portions on the recording medium (see, for example, Miyashita et al at Column 2, lines 21-38).

Therefore, while it is true that the Miyashita reference unfortunately refers to "embedding" hidden information such as watermarks into the primary (main) digital information, it must be understood that the remainder of the Miyashita reference makes is abundantly clear that what is really disclosed is storing the hidden information as secondary information in the so-called "jitters", not in the main information (see Miyashita Column 2, lines 29-35, and Column 7, lines 23-37) Thus, as stated at Column 5, lines 12-15 of Miyashita: "This realizes an optical disk reproducing apparatus having a function of protecting copyrights by reading ***the secondary digital information*** that is embedded with the jitter modulation and the radial modulation." (Emphasis added)

Therefore, while the Miyashita reference does state that an unauthorized copy can be distinguished from an original by whether or not the additional information (i.e., copyright information) is present in the so-called "jitters", that secondary (or "additional") information is not detected in the normal course of the playback of an unauthorized copy of a recording disk (-R, _RW, etc.). Thus, there is no alert or other mechanism present in copied "main" information in the Miyashita context to prevent further copies being made of an unauthorized copy as there is in the present invention.

In addition, Applicant respectfully submits that the Ueki reference does not make up for the deficiencies of the Miyashita reference. As is clear from the Ueki reference at Column 16, lines 33-60, that reference teaches the necessity of an appropriate CSS key stored in a pre-pit area corresponding to a given value in order to playback the information stored on the disk. Thus, the CSS key can be utilized for copyright protection. However, as described in the background section of the present specification, since this CSS key is scrambled during illegal copying, no unauthorized copying can occur even if the "main" information is not copyrighted..

New independent Claim 17 includes a restricting means for restricting the reproduction of the main information if it is determined that (i) a digital watermarking is embedded in the main information, and (ii) additional information indicating that the recording medium is not original is not formed on the optical storage medium. Applicant respectfully submits that neither of the presently cited references teach, disclose or suggest the limitations of this claim.

Specifically, Miyashita teaches only that reproduction is prevented based only upon a secret key recorded onto the optical recording medium as part of the secondary information (see, for example, Column 16, lines 25-63). In the Miyashita reference the secondary information is copyright information, not information indicating whether or not the recording medium is original. Further, as discussed above, the Miyashita reference does not teach, disclose or suggest the presence of watermarking of any type, much less that specifically described in the present specification, embedded within the main information.

Further, Applicant respectfully submits that the Ueki reference does not supply the deficiencies of the Miyashita in the latter regard. Ueki teaches that the information content of his recording medium is rendered unreadable when the CSS key is not copied correctly as discussed above. This is clearly not the same thing as is being claimed in New Claim 17, nor does it render New Claim 17 unpatentable when taken either alone or in combination with the Miyashita reference.

Accordingly, Applicant respectfully submits that new Claim 17 is not rendered unpatentable by either or both of the cited references.

Applicant also respectfully submits that New Claim 23, which includes limitations directed to the situation restricting the reproduction of the main information if it is determined that additional information is not formed on the optical recording medium and it is determined that digital watermarking is embedded in the main information, is patentable over the art currently of record for the same reasons as have been discussed in detail above. Specifically, in the Miyashita reference no watermarking is "embedded" in the main information in the manner herein contemplated by the present invention. Therefore, both conditions of this claim are not taught, disclosed or suggested by the Miyashita reference. Also, whether or not copying is allowed in the context of the Ueki reference depends upon the presence of a non-corrupted CSS key, not upon either of the conditions currently claimed by New Claim 23. Hence, Applicant respectfully submits that New Claim 23 is patentable over the cited references as well.

Finally, with respect to New Claims 12, 18 and 24, it is respectfully noted that those claims deal with the additional information being formed by a plurality of pits, each pit having a depth formed according to the additional information. The Examiner admits that the Miyashita reference does not disclose this feature of the present invention, but asserts that the Ueki reference makes up for the deficiency in the teachings of the Miyashita reference. Applicant respectfully notes, however, that the Ueki reference merely comments on typical grooves, lands and pre-pits. The Ueki reference does not disclose, teach or suggest that each pit is to have a depth formed according to the additional information. Hence, Applicant respectfully submits that the Ueki reference's disclosure is respectfully is totally insufficient to defeat the patentability of New Claims 12, 18 and/or 24 either alone or in combination with the disclosure of the Miyashita reference.

Finally, Applicant notes that with the exception of the above comments concerning Claims 12, 18 and 24, it relies upon the patentabilty of the independent claims of the new claim set submitted herewith in support of the patentabilty of the dependent claims thereof.

For each and all of the foregoing reasons, Applicant respectfully submits that the cited references are insufficient to support the Examiner's rejections as they apply to the new claims presented hereinabove. Neither reference discloses, teaches or suggests whether taken alone or in combination with the other the invention as hereinabove claimed. Accordingly, reconsideration and allowance of this application with Claims 11-28 as hereinabove presented is respectfully requested in response to this communication.

Applicant also believes that additional fees beyond those submitted herewith are not required in connection with the consideration of this response to the currently outstanding Official Action. However, if for any reason a fee is required, a fee paid is inadequate or credit is owed for any excess fee paid, you are hereby authorized and requested to charge and/or credit Deposit Account No. 04-1105, as necessary, for the correct payment of all fees which may be due in connection with the filing and consideration of this communication.

Respectfully submitted,

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